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A.D. 1853 . . . . . N<sup>o</sup> 2453.

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S P E C I F I C A T I O N

OF

ALEXANDER HETT.

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FURNACES.

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L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,  
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

AND SOLD AT THE QUEEN'S PRINTING OFFICE, EAST HARDING STREET,  
NEAR FLEET STREET.

1854.





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A.D. 1853 . . . . . N° 2453.

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**Furnaces.**

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**PROVISIONAL SPECIFICATION** left by Alexander Hett at the Office of the Commissioners of Patents, with his Petition, on the 24th October 1853.

*(Void by reason of notice to proceed not having been given within the 5 time prescribed by the Act.)*

I, ALEXANDER HETT, of Stoke Newington, in the County of Middlesex, do hereby declare the nature of the said Invention for "**CERTAIN IMPROVED MEANS OR ARRANGEMENTS FOR THE PREVENTION OF SMOKE, AND THE ECONOMISING OF FUEL IN FURNACES,**" to be as follows:—

- 10 The distinctive principle of my Invention is that of driving water by means of a blast of air (admitted into the ash-pit) between the fire bars of a furnace, amongst the fuel, and at the same time admitting air over the fuel through the furnace door, or through a suitable opening made for that purpose. The mode of carrying this into effect is as follows:—
- 15 Under the dead plate or in the mouth of the ash-pit a metal guard or case of any suitable size is to be placed; this guard or case should entirely block up the mouth of the ash-pit. In the centre of the case there is an aperture for the admission of a tube or pipe to convey a blast of air from a fan, which fan may be fixed in any convenient position. Above the aperture there is a smaller opening for
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*Hett's Impts. in the Prevention of Smoke and Economizing of Fuel.*

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the passage of a pipe conveying water from a tank or cistern, which should be placed above the level of the ash-pit. The water pipe within the guard or case is to be convoluted or twisted, and perforated to admit of the escape of water. The fan being actuated, a blast of air is forced into the case, and the water being turned on from the cistern the air 5 from the fan carries with it a portion of the water on to the fuel; at the same time the furnace door should be partially or fully opened, or if another opening is employed, that should be kept open to admit of a current of air over the fire. Instead of the above means or arrangements for the supply of water, I propose also to construct the fire bars 10 of a furnace hollow. In this case they are to be perforated on their under surfaces with a number of small holes, through which water may be made to flow, or fire bars of the ordinary construction may be employed, and a piece of tubing fixed under each bar perforated with holes underneath, for the escape of water, the fan being used in both 15 these cases to drive the water and air, as above described.

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LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1854.